

FORM PTO-1390
(REV 11-98)

ATTORNEY DOCKET NUMBER

1948-4631

U.S. APPLICATION NO. (If known, see 37 CFR 1.51)
09/423075

INTERNATIONAL APPLICATION PCT/FR99/00462	INTERNATIONAL FILING DATE 02 March 1999 (02.03.99)	PRIORITY DATE CLAIMED 02 March 1998 (02.03.98)
TITLE OF INVENTION SCREENING OF A PRINTED-CIRCUIT ELECTRONICS CARD MOUNTED ON A METAL SUBSTRATE		
APPLICANT(S) FOR DO/EO/US Jean Marc NICOLAI, Marc DUARTE, and Dung KONG-A-SIOU		

Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:

1. This is **FIRST** submission of items concerning a filing under 35 U.S.C. 371.
2. This is **SECOND** or **SUBSEQUENT** submission of items concerning a filing under 35 U.S.C. 371.
3. This express request to begin national examination procedures (35 U.S.C. 371(f) at any time rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. 371 (b) and PCT Articles 22 and 39 (1)).
4. A proper Demand for International Preliminary Examination was made by the 19th month from the earliest claimed priority date.
5. A copy of the International Application as filed (35 U.S.C. 371(c)(2))
 - a. is transmitted herewith (required only if not transmitted by the International Bureau).
 - b. has been transmitted by the International Bureau.
 - c. is not required, as the application was filed in the United States Receiving Office (RO/US).
6. A translation of the International application into English (35 U.S.C. 371(c)(2)). With oath.
7. Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))
 - a. are transmitted herewith (required only if not transmitted by the International Bureau).
 - b. have been transmitted by the International Bureau.
 - c. have not been made; however, the time limit for making such amendments has NOT expired.
 - d. have not been made and will not be made.
8. A translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).
9. An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)). Signed
10. A translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).

Items 11. to 16. below concern document(s) or information included.

11. An Information Disclosure Statement under 37 CFR 1.97 and 1.98.
12. An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.
13. A **FIRST** preliminary amendment.
 - A **SECOND** or **SUBSEQUENT** preliminary amendment.
14. A substitute specification.
15. A change of power of attorney and/or address letter.
16. Other items or Information:
 - a. copy of first page of International Application
 - b. copy of International Search Report

U.S. APPLICATION NO (if known, see 37 C.F.R. 1.51) 09/423075	INTERNATIONAL APPLICATION NO. PCT/FR99/00462	ATTORNEY'S DOCKET NO 1948-4631		
17. <input checked="" type="checkbox"/> The following fees are submitted: BASIC NATIONAL FEE (37 CFR 1.492 (a) (1) - (5)):		CALCULATIONS PTO USE ONLY		
Neither international preliminary examination fee (37 CFR 1.482) nor international search fee (37 CFR 1.445(a)(2) paid to USPTO and International Search Report not prepared by the EPO or JPO \$970.00				
International preliminary examination fee (37 CFR 1.482) not paid to USPTO but International Search Report prepared by the EPO or JPO \$840.00				
International preliminary examination fee (37 CFR 1.482) not paid to USPTO but international search fee (37 CFR 1.445(a)(2) paid to USPTO \$760.00				
International preliminary examination fee paid to USPTO (37 CFR 1.482) but all claims did not satisfy provisions of PCT Article 33 (1) - (4) \$670.00				
International preliminary examination fee paid to USPTO (37 CFR 1.482) and all claims satisfied provisions of PCT Article 33(1) - (4) \$96.00				
ENTER APPROPRIATE BASIC FEE AMOUNT =		\$840.00		
Surcharge of \$130 for furnishing the oath or declaration later than <input type="checkbox"/> 20 <input type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492(e)).		\$		
CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE	\$
Total claims	7 - 20 =	0	X \$18.00	\$ 0
Independent claims	1 - 3 =	0	X \$78.00	\$ 0
MULTIPLE DEPENDENT CLAIM(S) (if applicable)		+ \$260.00	\$	
TOTAL OF ABOVE CALCULATIONS =		\$840.00		
Reduction of ½ for filing by small entity, if applicable. A Small Entity Statement must also be filed (Note 37 CFR 1.9, 1.27, 1.28).		\$		
SUBTOTAL =		\$840.00		
Processing fee of \$130.00 for furnishing the English translation later than <input type="checkbox"/> 20 <input type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492(f)).		\$		
TOTAL NATIONAL FEE =		\$840.00		
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property		\$ 40.00		
TOTAL FEES ENCLOSED		\$880.00		
		Amount to be refunded:	\$	
		charged	\$	
<p>a. <input checked="" type="checkbox"/> A check in the amount of \$880.00 to cover the above fees is enclosed.</p> <p>b. <input type="checkbox"/> Please charge my Deposit Account No. _____ in the amount of \$ _____ to cover the above fees.</p> <p>c. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 13-4500; Order No. 1948-4631. A duplicate copy of this sheet is enclosed.</p>				
November 1, 1999				
NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status.				
SEND ALL CORRESPONDENCE TO: Morgan & Finnegan, LLP 345 Park Avenue NY, NY 10154-0053 Telephone: 212-758-4800 Telecopier: 212-751-6849		 SIGNATURE <hr/> Joseph A. Calvaruso NAME <hr/> 28,287 REGISTRATION NO.		

09/423075

Docket No. 1948-4631

420 Rec'd PCT/PTO 01 NOV 1999

IN THE UNITED STATES

[] RECEIVING OFFICE (RO/US)
[x] DESIGNATED OFFICE (DO/US)
[x] ELECTED OFFICE (EO/US)

INTERNATIONAL APPLICATION NO. INTERNATIONAL FILING DATE PRIORITY DATE CLAIMED
PCT/FR99/00462 02 March 1999 (02.03.99) 02 March 1998 (02.03.98)

TITLE OF INVENTION

SCREENING OF A PRINTED-CIRCUIT ELECTRONICS CARD MOUNTED ON A METAL SUBSTRATE

APPLICANT(S)

Jean Marc NICOLAI, Marc DURATE and Dung KONG-A-SIOU

BOX PCT

Commissioner of Patents and Trademarks
Washington, D.C. 20231

**VERIFIED CERTIFICATION OF EXPRESS MAILING DATE
(INTERNATIONAL APPLICATION (37 CFR 1.10(c))**

I declare that on November 1, 1999 I deposited with the United States Postal Service in an envelope "Express Mail, Post Office to Addressee", bearing Label Number EJ606950795US, addressed to the "Commissioner of Patents and Trademarks, Washington, D.C. 20231" and having an express mail certification which I executed, the following papers:

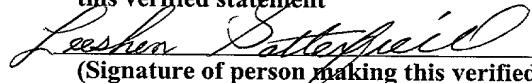
Transmittal Letter with translation of application and oath; signed oath of the inventors; 2 sheets of drawings, recordation of assignment w/original assignment; preliminary amendment; copy of first page of the international application; a copy of the International Search Report; data entry sheet; return postcard and check in the amount of \$880.00

A copy of these papers from the file of this application is attached.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application of any patent issuing thereon.

Leeshon Satterfield

(Typed or printed name of person making
this verified statement)


(Signature of person making this verified statement)

Date November 1, 1999

33/423075

420 Rec'd PCT/PTO 01 NOV 1999
PATENT
Docket No. 1948-4631

5

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE (DO/EO/US)

10 In re application of: Jean Marc NICOLAI,
Marc DUARTE and Dung KONG-A-SIOU
International Application No. : PCT/FR99/00462
15 International Filing Date : 02 March 1999 (02.03.99)
Serial No. : To be assigned
20 Filed : To be assigned
For : SCREENING OF A PRINTED-CIRCUIT
25 ELECTRONICS CARD MOUNTED ON A METAL
SUBSTRATE

PRELIMINARY AMENDMENT

30 Assistant Commissioner For Patents
Box PCT
Washington, D.C. 20231

35 Attention: DO/EO/US

S I R:

40 Prior to examination and calculation of the filing
fee, please amend the above-identified application as follows:

Insert the attached -- Title Page --.

45 IN THE SPECIFICATION

At page 1, before line 4 insert -- Background of the

5 Invention --

At page 2, before line 7 insert -- Brief Summary of
the Invention --

At page 2, before line 29 insert -- Brief
Description of the Drawings --

10 At page 3, before line 10 insert -- Detailed
Description of the Invention --

IN THE CLAIMS

15 Amend claims 1 through 7 as follows:

--1. (amended) An [A]assembly [including] comprising a
printed-circuit electronics card [(2)] mounted on a metal
substrate [(1)], [as well as] a metal screening cover [(3)]
20 electrically connected to the substrate [(1)] the cover having
an edge, the substrate [(1)] exhibiting a recessed gutter
[(4)] in which the edge of the cover [(3)] is accommodated,
[characterised in that] wherein the [said] edge is crimped
onto the [said] substrate {(1)} in the gutter [(4)].--

25 --2. (amended) An [A]assembly according to Claim 1,
[characterised in that] wherein the edge of the cover [(3)]
terminates in at least one tab [(5)] as a return, which is
crimped into the gutter [(4)], the gutter and the tab each
30 having a bottom portion.--

5 --3. (amended) An [A]assembly according to Claim 2,
[characterised in that] wherein the bottom portions of the
[said] gutter [(4)] and the [said] tab [(5)] are below the
electronics card [(2)].--

10 --4. (amended) A [M]ethod for producing an assembly
according to [one of the preceding claims, characterised by]
Claim 1, [the following different stages] comprising the steps
of:

15 [-] stamping the substrate [(1) is stamped] so as to
form a gutter [(4)] in the substrate [it],

[-] assembling the electronics card [(2) is
assembled] on to the [said] substrate,

20 [-] positioning the cover [(3) is positioned] on the
assembly [thus obtained,] and arranging the edge of the [said]
cover [(3)] in the [said] gutter [(4)],

[-] crimping the [said] edge [is crimped] on to the
[said] substrate [(1)].--

--5. (amended) A [M]ethod according to [the preceding
25 claim, characterised in that] Claim 4, wherein the crimping is
carried out by localised crushing of material of the substrate
[(1)] onto one or more tabs which terminate the edge of the
cover [(3)], in such a way as to exert opposed forces which
cancel out on the tab or tabs [(5)].--

30

--6. (amended) A [M]ethod according to [one of Claims

5 4 and 5, characterised in that] Claim 4, wherein the stamping forms, at the edge of the gutter, a protuberance [intended to constitute the] comprising material to be displaced during the crimping.--

10 --7. (amended) A [M]method according to [one of Claims 4 to 6, characterised in that] Claim 4, wherein only some of the tabs of the cover [(3)] are crimped.--

IN THE ABSTRACT

15 Delete the Abstract in its entirety and insert new page 9.

REMARKS

20 The above application has been amended to place it in proper format for U.S. prosecution. Character references have been eliminated in the Claims and the Claims have been amended to eliminate multiple dependent claims. No new matter 25 was added to the application as a result of this amendment.

5 The Commissioner is hereby authorized to charge any additional fees which may be required for this amendment, or credit any overpayment to Deposit Account No. 13-4500, Order No. 1948-4631.

Respectfully submitted,

10 MORGAN & FINNEGAN, L.L.P.

Dated: November 1 1999

By: Joseph A. Calvaruso
Registration No. 28,287

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20

5 The Commissioner is hereby authorized to charge any additional fees which may be required for this amendment, or credit any overpayment to Deposit Account No. 13-4500, Order No. 1948-4631.

Respectfully submitted,

10 MORGAN & FINNEGAN, L.L.P.

Dated: November 1 1999

By: Joseph A. Calvaruso
Registration No. 28,287

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5

ABSTRACT OF THE DISCLOSURE

The invention proposes an assembly including a printed-circuit electronics card mounted on a metal substrate, as well as a metal screening cover electrically connected to the substrate. The substrate exhibits a recessed gutter in which the edge of the cover is accommodated. The edge is crimped onto the substrate in the gutter.

The invention also proposed a method of producing such an assembly.

P&G TOP SECRET

09/423075

420 Rec'd PCT/PTO 01 NOV 1999
PATENT

Docket No. 1948-4631

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES PATENT APPLICATION

For: SCREENING OF A PRINTED-CIRCUIT ELECTRONICS
CARD MOUNTED ON A METAL SUBSTRATE

InventorS: Jean Marc NICOLAI

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09/423075

420 Rec'd PCT/PTO 01 NOV 1999

I, Eur Ing James Francis Bradley BSc CEng MIEE MIL,
translator to Engineering Translations, of "Hollyhocks",
Cherry Tree Road, Farnham Royal, Buckinghamshire,
England, hereby declare that I am conversant with the
French and English languages and am a competent
translator thereof. I declare further that to the best
of my knowledge and belief the following is a true and
correct translation of the accompanying documents in the
French language.

Signed this 27th day of September 1999



J. F. BRADLEY

For and on behalf of Engineering Translations

"SCREENING OF A PRINTED-CIRCUIT ELECTRONICS CARD

420 Rec'd PCT/PTO 01 NOV 1999
MOUNTED ON A METAL SUBSTRATE

The present invention relates to the electromagnetic screening of a printed-circuit electronics card mounted on a metal substrate.

It finds a non-limiting application advantageously to the protection of control circuits of discharge lamps.

Such electromagnetic screening is generally achieved by means of a metal cover closed over the substrate.

At present, two main types of techniques are used to fit such a cover.

According to a first type of solution, the electrical connection of the metal cover to the earth which the metal substrate constitutes is formed independently of the mechanical fixing of the said cover with respect to the said substrate and to the electronics card. For example, the electrical connection to earth may then be formed by means such as riveting, screwing, a soldered joint or even a soldered wire link.

In a second type of solution, the metal cover is fixed mechanically to the substrate by means of an adhesive which is made from an electrically conducting material and which carries out the electrical connection function.

However, these two types of solutions both exhibit drawbacks.

In particular, the solutions in which the mechanical fixing and electrical connection are achieved by different means require additional operations during manufacture and are expensive.

Moreover, with these solutions, the leaktightness between the metal cover and the substrate is not generally assured.

Equally, the solutions in which a conducting adhesive are used also carry a high cost particularly because of the operation of applying a bead of adhesive.

Moreover, with these solutions, the adhesive joints pose problems of behaviour over time, as well as of response to temperature and to vibration.

One object of the invention is to propose a screening solution which does not exhibit these drawbacks.

To this end, the invention proposes an assembly including a printed-circuit electronics card mounted on a metal substrate, as well as a metal screening cover electrically connected to the substrate, the substrate exhibiting a recessed gutter in which the edge of the cover is accommodated, the said edge being crimped onto the said substrate in the gutter.

The invention also proposes a method for producing such an assembly, characterised by the following stages:

- the substrate is stamped so as to form a gutter in it,

- the electronics card is assembled onto the said substrate,

- the cover is positioned on the assembly thus obtained, arranging the edge of the said cover in the said gutter,

- the said edge is crimped onto the said substrate.

Other characteristics of the invention will emerge further from the description which follows. This description is purely illustrative and not limiting.

It should be read in the light of the attached drawings on which:

- Figure 1 is a diagrammatic representation in a sectional view illustrating the fixing of a screening

cover in accordance with one possible embodiment for the invention;

- Figures 2a and 2b are diagrammatic representation, in a top view, illustrating two possible crimping modes;

- Figures 3 and 4 are diagrammatic representations in a sectional view similar to that of Figure 1 illustrating a possible implementation for crimping the metal cover onto the substrate.

10 In Figure 1, a metal substrate 1, a printed-circuit electronics card 2 and a metal screening cover 3 have been represented.

The substrate 1 has a recessed gutter 4 produced by stamping the material. This gutter 4 extends over 15 the said substrate along a contour which corresponds to that of the edge of the metal cover 3.

This gutter 4 is intended to accommodate the edge of the metal cover 3.

20 The metal cover 3 is fixed into the gutter 4 by crimping.

To this end, the said edge is extended by one or more tabs 5, which form an L-shaped return extending outwards from the cover 3.

Such a tab 5 is accommodated in a region of the 25 gutter 4 which is shaped with a width which coincides with that of the said tab 5. Hence, the said tab 5 is inserted exactly into the recessed shape of the gutter 4.

The length of such a tab 5 is 3 mm, for example, 30 while that of a recessed pattern which accommodates it is 4 mm.

The cover 3 is mounted onto the substrate 1 in the following way.

The substrate 1 is first of all stamped so as to 35 form the gutter 4. At the same time an excess of mate-

rial is obtained which in this instance constitutes the edge of the gutter 4.

Next, the electronics card 2 is assembled onto the substrate 1.

5 The cover 3 is then put in place in the gutter 4.

When the cover 3 is correctly positioned, localised crimping is carried out, by lateral displacement of the material of the substrate on top of corners of 10 the tabs 5 of the cover 3. The material displaced during the crimping is that which forms the edges of the gutter originating from the stamping. More particularly, as Figures 2a and 2b illustrate, the material pushed back by the stamping during the formation of the 15 gutter exerts on the tabs 5, after crimping, parallel forces cancelling each other out. The material displaced during the crimping is referenced by 6.

Two implementations are possible: the crimping can be carried out by crushing a fairly short part of 20 the substrate coming to cover over the fairly long tabs 5 (Figure 2a); in a variant, it can be carried out by simultaneous crushing of two parts of the substrate coming to cover over fairly short tabs 5 (Figure 2b).

As Figures 3 and 4 illustrate, the mould in 25 which the substrate 1 is stamped may be shaped in such a way that the said stamped substrate 1 exhibits, at the edge of the gutter 4, a protuberance 7 which constitutes the excess material to be displaced during the crimping; the height of this protuberance is adjusted 30 so as to remain below the upper level of the electronics card 2, so as not to prevent the screen-printing of the soldering paste for mounting the components prior to the cover 3 being put in place.

Moreover, the depth of the gutter 4 is adjusted 35 so that the bottom of the said gutter 4 and the return 5 are below the electronics card 2. This makes it pos-

sible to prevent any risk of leakage of electromagnetic waves.

Advantageously, during the initial crimping, only some of the tabs of the cover 5 are used, which 5 makes it possible to preserve the possibility of using the other tabs, in the event of a subsequent dismantling, for a second crimping.

Consequently, the method which has just been described is compatible with a removal of the cover.

10 The technique which has just been described exhibits numerous advantages:

- it is much simpler than the prior techniques, since the mechanical mounting of the cover, the positioning thereof and the forming of electrical contact 15 between the cover and the metal substrate are carried out in a single operation;

- the completed assembly allows for an absence of leakages of electromagnetic waves;

20 - the metal substrate remains perfectly leak-tight, since it is free from perforations;

- the mechanical rigidity of the assembly as a whole is enhanced; in particular, the gutter formed over the whole of the periphery of the metal substrate constitutes a rib which contributes to this rigidity; 25 this rigidity is also enhanced by the stamping of the cover when it is crimped onto the metal substrate; it will be noted that the increase in the rigidity obtained makes it possible to reduce the thickness of the metal substrate;

30 - equally, with the technique proposed, it is possible to remove then to refit the cover.

The screening which has just been described may be used in all fields of electronics where insulated metal substrates are used, and particularly advantageously in motor vehicle electronics, energy conver-

sion, power supplies, power multiplexers, electric motor power supplies, etc.

In particular it can be employed in the screening of the control circuit (ballast, according to the terminology of the person skilled in the art) of a discharge lamp where the problem of leakages of electromagnetic waves has not been completely resolved up to the present.

CLAIMS

1. Assembly including a printed-circuit electronics card (2) mounted on a metal substrate (1), as well as a
5 metal screening cover (3) electrically connected to the substrate (1), the substrate (1) exhibiting a recessed gutter (4) in which the edge of the cover (3) is accommodated, characterised in that the said edge is crimped onto the said substrate (1) in the gutter (4).

10 2. Assembly according to Claim 1, characterised in that the edge of the cover (3) terminates in at least one tab (5) as a return, which is crimped into the gutter (4).

15 3. Assembly according to Claim 2, characterised in that the bottom of the said gutter (4) and the said tab (5) are below the electronics card (2).

4. Method for producing an assembly according to one of the preceding claims, characterised by the following different stages:

20 - the substrate (1) is stamped so as to form a gutter (4) in it,
- the electronics card (2) is assembled onto the said substrate,
- the cover (3) is positioned on the assembly thus obtained, arranging the edge of the said cover (3) in the said gutter (4),
- the said edge is crimped onto the said substrate (1).

25 5. Method according to the preceding claim, characterised in that the crimping is carried out by localised crushing of material of the substrate (1) onto one or more tabs which terminate the edge of the cover (3), in such a way as to exert opposed forces which cancel out on the tab or tabs (5).

30 6. Method according to one of Claims 4 and 5, characterised in that the stamping forms, at the edge of

the gutter, a protuberance intended to constitute the material to be displaced during the crimping.

7. Method according to one of Claims 4 to 6, characterised in that only some of the tabs of the cover
5 (3) are crimped.

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420 Rec'd PCT/PTO 1 NOV 1999

"SCREENING OF A PRINTED-CIRCUIT ELECTRONICS CARD
MOUNTED ON A METAL SUBSTRATE"

ABSTRACT

The invention proposes an assembly including a printed-circuit electronics card (2) mounted on a metal substrate (1), as well as a metal screening cover (3) electrically connected to the substrate (1). The substrate (1) exhibits a recessed gutter (4) in which the edge of the cover (3) is accommodated. The said edge is crimped onto the said substrate (1) in the gutter (4).

The invention also proposes a method of producing such an assembly.

Figure 1

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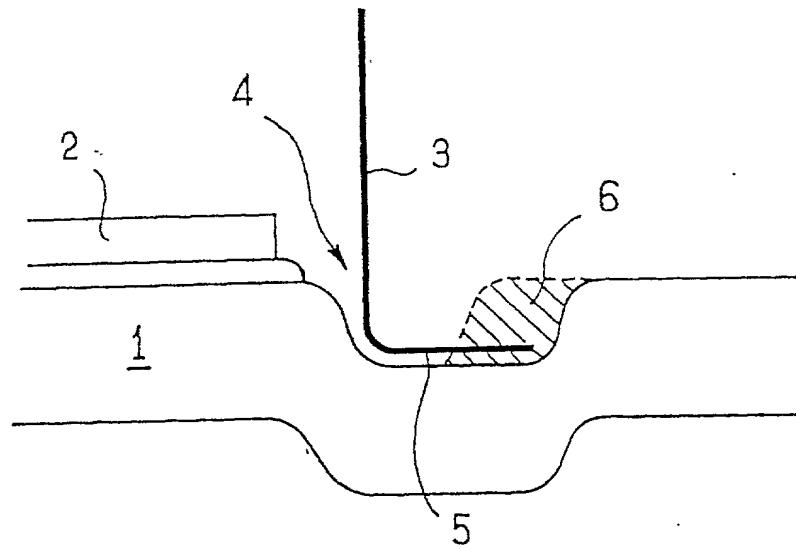


FIG. 1

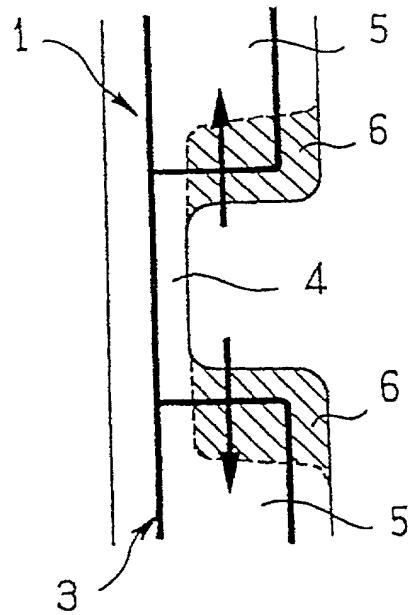


FIG. 2a

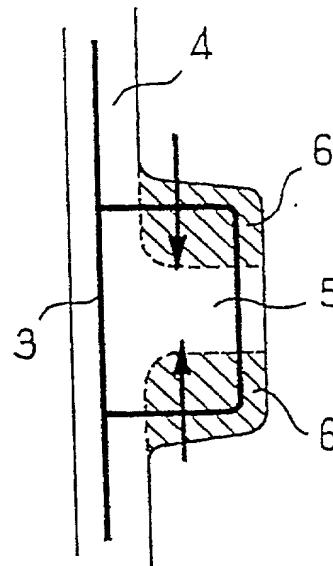
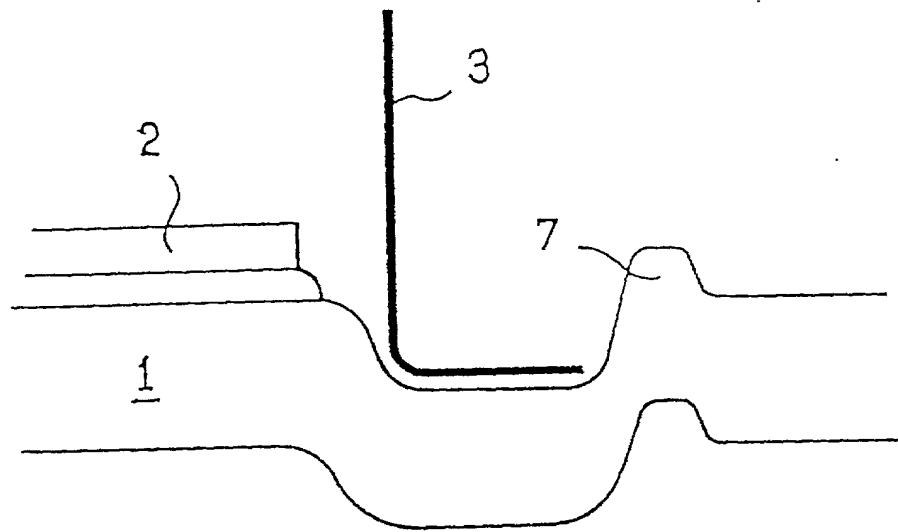


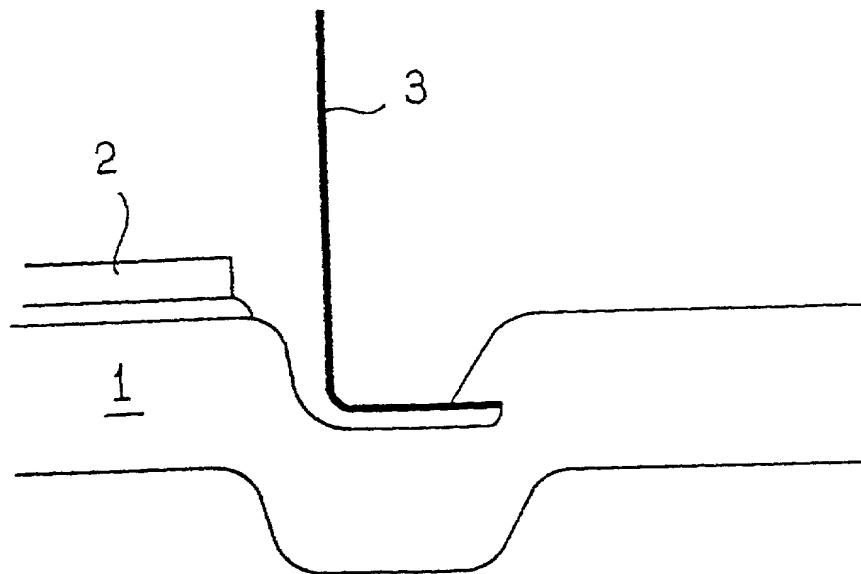
FIG. 2b

09/423075

2 / 2



FIG_3



FIG_4

DECLARATION FOR PATENT APPLICATION

Docket N° 1948-4631

EAM 0767

As a below named inventor, I hereby declare that my residence, post office address and citizenship are as stated below next to my name, and I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled **Screening of a printed-circuit electronics card mounted on a metal substrate**

the specification of which

(check one) is attached hereto. was filed on

as U.S. Application Serial Number

and was amended on

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above, to the best of my ability. I acknowledge the duty to disclose information which is material to the examination of this application in accordance with 37 C.F.R. 1.56 as set forth on the reverse side hereof. I hereby claim foreign priority benefits under 35 U.S.C. 119/365 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date (1) before that of the application on which priority is claimed or (2) if no priority claimed, before the filing date of this application :

PRIOR FOREIGN APPLICATION(S)

Number	Country	Month /Day /Year Filed	Priority Claimed yes no
98 02478	France	03/02/1998	xx

I hereby claim the benefit under 35 U.S.C. 120/365 of all United States and PCT international applications listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in such prior applications in the manner provided by the first paragraph of 35 U.S.C. 112, I acknowledge the duty to disclose material information as defined in 37 C.F.R. 1.56 which occurred between the filing date of the prior applications and the national or PCT international filing date of this application :

PRIOR U.S. OR PCT APPLICATION(S)

Application serial N°	month/day/Year filed	Status
PCT/FR99 00462	03/02/1999	patented pending abandoned xx

And I hereby appoint the following attorney (s) and/or agent(s) to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith :

(2) Jerome G. Lee (Reg. N° 16,967)
Joseph A. Calvaruso (Reg. N° 28,287)

SEND CORRESPONDENCE TO :

DIRECT TELEPHONE CALLS TO :

MORGAN & FINNEGAN
345 Park Avenue, NEW YORK, N.Y. 10154

(212) 758-4800

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true ; and further that these statements were made with the knowledge that wilful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such wilful false statements may jeopardise the validity of the application or any patent issued thereon.

1) Inventor's signature

*jean-marc nicolai**jean-marc nicolai*

Date (month/day/year)

08/02/1999

Citizenship French

Inventor's Name (typed)

jean MarcNICOLAI

Residence (City)

92400 COURBEVOIE

First

Middle initial

Family Name

State/Foreign/country

FRANCE

FRX

Post Office Address (Include zip code)

1, bis Rouget de Lisle

2) Inventor's signature

*Marc Duarte**Marc Duarte*

Date (month/day/year)

09/03/1999

Citizenship French

Inventor's Name (typed)

MarcDUARTE

First

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